

() 101
1426/1425

1425/11/4 :

H = 1, C = 12, N = 14, O = 16, Na = 23, Al = 27, :
S = 32, Cl = 35.5, Ca = 40.1, Fe = 56, Cu = 63.5,
 $N_A = 6.02 \times 10^{23}$, $R = 0.0821 \text{ atm L mol}^{-1} \text{ K}^{-1} = 8.314 \text{ J mol}^{-1} \text{ K}^{-1}$:

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(.)

: -2
 $P_{\text{solution}} = X_{\text{solute}} \cdot P_{\text{H}_2\text{O}}^{\circ}$ ($P_{\text{solution}} = X_{\text{H}_2\text{O}} \cdot P_{\text{H}_2\text{O}}^{\circ}$ ()
 $P_{\text{solution}} = X_{\text{H}_2\text{O}} \cdot P_{\text{solute}}^{\circ}$ ($P_{\text{H}_2\text{O}}^{\circ} = X_{\text{solute}} \cdot P_{\text{solute}}^{\circ}$ ()
(solute = solution =)

(°C) (ΔT_f) (0.27°C) (ΔT_b) -3
[$k_b(\text{H}_2\text{O}) = 0.51 \text{ }^{\circ}\text{C/m}$, $k_f(\text{H}_2\text{O}) = 1.86 \text{ }^{\circ}\text{C/m}$] :
0.98 (0.54 (0.11 (0.68 (

.(50°C) CHCl_3 (50 g) CCl_4 (50 g) -4
(526 torr) (317 torr) CHCl_3 CCl_4
: (torr)
843 (435 (269 (139 (

(200 g) ($\text{C}_2\text{H}_6\text{O}_2$) (6.5 g) -5
: ($k_f(\text{H}_2\text{O}) = 1.86 \text{ }^{\circ}\text{C/m}$)
-0.333 (-0.976 (-3.0 (-2.0 (

: -6
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: -7
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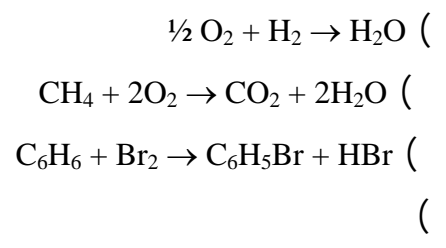
-8

$w = P\Delta V$ ($\Delta E = E_2 - E_1$ ($q = C\Delta t$ ($\Delta U = q + w$ (

: kJ 27.7°C -9



: -10



: -11

[B] M	[A] M	Rate (M.s ⁻¹)
0.1	0.1	2×10 ⁻³

0.1	0.2	2×10^{-3}
0.2	0.1	4×10^{-3}

:

(20°C) (30°C) -12

: kJ mol⁻¹

0.216 (51.2 (7.38 (8.90 (

-13

$.2.53 \times 10^{-2} \text{ s}^{-1}$

(M) (100 s) 10 M

0.008 (0.08 (8 (0.8 (

-14

:(700°C)

$2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g})$ $K_p = 5.21$

: K_p

$\text{SO}_3(\text{g}) \rightleftharpoons \text{SO}_2(\text{g}) + \frac{1}{2} \text{O}_2(\text{g})$

0.44 (1.14 (2.28 (0.19 (

-15

:

$\text{N}_2(\text{g}) + 3\text{H}_2(\text{g}) \rightleftharpoons 2\text{NH}_3(\text{g}) +$

((((

-16

:

$2\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{N}_2\text{O}(\text{g})$ $K_c = 6.5 \times 10^{-2}$

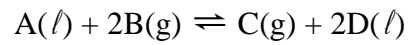
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$[\text{N}_2\text{O}] = 0.0025 \text{ M}, [\text{O}_2] = 0.075 \text{ M}, [\text{N}_2] = 0.06 \text{ M}$

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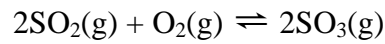
: -17



: (K_c)

$$\frac{[C]}{[B]^2} \quad \left(\quad \frac{[C][D]^2}{[A][B]^2} \quad \left(\quad \frac{[D]^2}{[A][B]^2} \quad \left(\quad \frac{[A][B]^2}{[C][D]^2} \quad \left($$

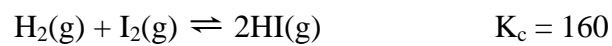
: K_p -18



: K_c (300°C) (3.4)

$$360 \quad \left(\quad 3.4 \quad \left(\quad 160 \quad \left(\quad 260 \quad \left($$

: -19



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$$[I_2] = 1.46 \times 10^{-3} \text{ M}, [HI] = 2.21 \times 10^{-3} \text{ M}$$

:

$$2.09 \times 10^{-5} \quad \left(\quad 1.46 \times 10^{-3} \quad \left(\quad 2.21 \times 10^{-3} \quad \left(\quad \left($$

:

-20

$$t_{1/2} \quad \left(\quad E_a \quad \left(\quad t_{1/2} \quad \left(\quad E_a \quad \left($$

10	9	8	7	6	5	4	3	2	1	
20	19	18	17	16	15	14	13	12	11	

10	9	8	7	6	5	4	3	2	1	
20	19	18	17	16	15	14	13	12	11	

10	9	8	7	6	5	4	3	2	1	
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20	19	18	17	16	15	14	13	12	11	